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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,450	06/01/2001	Michael I. Catherwood	068354.1447	8450

31625 7590 11/23/2004

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EXAMINER

ELLIS, RICHARD L

ART UNIT PAPER NUMBER

2183

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/870,450	Applicant(s) CATHERWOOD, MICHAEL I.	
	Examiner Richard Ellis	Art Unit 2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/30, 8/31, & 9/10/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,12-15 and 24-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,12-15 and 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/30, 9/29, 10/25</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-2, 12-15 and 24 remain for examination. Claims 25-30 are newly presented for examination.
2. It is noted that applicant submitted three separate copies of the present submission within an eleven day time period, two of which failed to comply with the rules for formatting of amendments and were further unsigned as well. This submission of multiple copies of the same document, within such a short time window, creates unnecessary confusion as to which document is indeed the final correctly submitted document. It is suggested that in the future applicant proofread his submissions carefully so that only one submission of a final correct document is necessary, removing any confusion as to which document is correct vs. which document is in error.
3. The information disclosure statement filed August 30, 2004 fails to fully comply with 37 CFR 1.98(a)(2), which requires a legible copy of each foreign patent and each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information non-compliant information referred to therein has not been considered. The information which is non-compliant is the foreign and non-patent document citations. Applicant submitted a CD-ROM which applicant claims contains copies of those references, however, applicant is reminded that the provisions of 37 CFR 1.98 require submission of the documents themselves, not a CD-ROM of the documents. Applicant is also reminded that the only provision for submission of a CD-ROM in a US Patent application is for 1) a large table, 2) a computer program listing, or 3) a genetic sequence listing. As IDS documents are not any of those three items, there is no provision for submission of IDS documents on CD-ROM.
4. The text of those sections of Title 35, US Code not included in this action can be found in a prior Office Action.
5. Claims 1-2, 12-15, 24 and new claims 25-30 are rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time

the application was filed, had possession of the claimed invention.

6. Claims 1-2, 12-15, 24 and new claims 25-30 are rejected under 35 USC 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. Claims 24-30 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant's cancellation of claim 22 (the parent claim to claim 24) while failing to cancel or amended the dependency of claim 24 has resulted in claim 24 being a dependent claim without a corresponding parent claim.

7.1. The following terms lack proper antecedent basis:

7.1.1. "the find first changed bit instruction" claims 25-30;

8. Claims 1-2, 12-15, and 24 are rejected under 35 USC § 103 as being unpatentable over *Digital VAX 11/780 Architecture Handbook* ("Digital"), copyright 1977, Digital Equipment Corporation., in view of *Intel Pentium Processor Family Developer's Manual, Volume 3, Architecture and Programming Manual* ("Intel"), 1995, Intel Corporation.

Digital and Intel were cited as prior art references in paper number 3, mailed May 28, 2004.

9. The rejections are respectfully maintained and incorporated by reference as set forth in the last office action, paper number 3, mailed May 28, 2004.

10. New claim 25, 27-28, and 30 are rejected under 35 USC 102(b) as being clearly anticipated by Digital.

Digital taught (e.g. see pgs. 7-16 to 7-17) the invention as claimed (as per new claims 25 and 28), including a data processing ("DP") system comprising:

10.1. a method of processing a bit operation instruction (pg. 7-16, "FIND FIRST"), comprising;

- 10.2. fetching and decoding (it is inherent that the VAX CPU will both fetch and decode instructions) a find first bit instruction ("FIND FIRST");
 - 10.3. executing (it is inherent that the VAX CPU will execute the instruction) the find first change bit instruction on a source operand (base.ab) to calculate a result (findpos.wl) corresponding to the first bit position meeting the criteria of the instruction (pg. 7-16, Description section);
 - 10.4. storing the result (pg. 7-16, Description, "If a bit in the indicated state is found, the find position operand is replaced by the position (relative to the base) of a bit one position to the left of the specified field").
11. As to claims 27 and 30, Digital taught that the find first bit change instruction finds the first bit change from the right side of a memory location (see figure under "Operation").
12. New claims 26 and 29 are rejected under 35 USC § 103 as being unpatentable over *Digital VAX 11/780 Architecture Handbook* ("Digital"), copyright 1977, Digital Equipment Corporation., as applied to claims 25, 27-28, and 30, supra., in view of *Intel Pentium Processor Family Developer's Manual, Volume 3, Architecture and Programming Manual* ("Intel"), 1995, Intel Corporation.
13. Digital in view of Intel taught a find first changed bit instruction which finds the first changed bit from the left side of the memory location for the reasons presented in the prior office action at paragraphs 19-20.
14. Applicant's arguments filed September 10, 2004, paper number 20040910, have been fully considered but they are not deemed to be persuasive.
15. In the remarks, applicant argues in substance:
- 15.1. That: "Applicant respectfully disagrees and submits that the application is enabling to one of ordinary skill in the art to practice the invention without undue experimentation. The Examiner states that the disclosure presented is not enabling. The Examiner, however, has cited the Digital VAX11/780 Architecture Handbook ("Digital") and the Intel Pentium Processor Family Developer's Manual Volume 3: Architecture and Programming Manual ("Intel") references as enabling prior art to make rejections for anticipation and obviousness. **Neither the cited portion of Digital nor the cited portions of Intel references contain more disclosure than the present application.**

Therefore, by the Examiner's reasoning, neither the cited portion of Digital nor the cited portion of Intel are enabling disclosures for use in showing anticipation or obviousness."

This is not found persuasive because applicant is reminded of MPEP § 2121 which states:

"When the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on applicant to provide facts rebutting the presumption of operability. In re Sasse, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). See also MPEP § 716.07."

Applicant has provided no facts rebutting the presumption, but merely asserted that the references are not enabled. Additionally, applicant's argument is a lose-lose proposition for applicant. Because if by chance applicant is correct, and the references are not enabling, applicant has now admitted on the record that his specification is equal in disclosure to the references, and therefore that his specification is also not enabling. Alternately, if the references are indeed enabling, then they both anticipate and render obvious applicant's claims. In either scenario, applicant's application is rejected.

15.2. That: "The cited portion of Digital does not disclose a find first change bit instruction, as required by the claims.

This is not found persuasive because applicant's attention is drawn to the Digital reference. The description contains the following sentence:

"The field is tested for a bit in the state indicated by the instruction starting at bit 0 and extending to the highest bit in the field."

Given that the two possible states are "Find First Clear" or "Find First Set" (opcodes section), in order to "test for a bit in the state indicated" by "starting at bit 0 and extending to the highest bit in the field" the instruction is necessarily finding the "first change bit" within the field. For example, if using the "Find First Set" opcode to find the first bit that is set, the instruction will scan from bit 0 to the highest bit looking for the "first set" bit. The "first set" bit will exactly occur at the point in the field where the value of the bits scanned to that point changes, from zero bits to a one bit. Accordingly, the instruction is a "find first change bit" instruction exactly as claimed.

- 15.3. That: "Neither the references nor the Examiner provide any teaching or result to combine Intel and Digital"

This is not found persuasive because the measure of obviousness is:

"Not only the specific teachings of a reference but also reasonable inferences which the artisan would have logically drawn therefrom may be properly evaluated in formulating a rejection." *In re Preda*, 401 F.2d 825, 159 USPQ 342 (CCPA 1968) and *In re Shepard* 319 F.2d 194, 138 USPQ 148 (CCPA 1963).

"Skill in the art is presumed." *In re Sovish*, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985).

"Furthermore, artisans must be presumed to know something about the art apart from what the references disclose." *In re Jacoby*, 309 F.2d 513, 135 USPQ 317 (CCPA 1962).

"The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference." *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969).

"Every reference relies to some extent on knowledge of persons skilled in the art to complement that which is disclosed therein." *In re Bode*, 550 F.2d 656, 193 USPQ 12 (CCPA 1977).

Accordingly, the claims are obvious and the combination is suggested because an artisan would have "logically drawn therefrom" the "inference" that scanning a bit from either size of a memory word was a desirable property.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobus et al., 3,930,235, discloses a find-first-one instruction which finds a first one bit from the left side of a data word in memory.

17. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE

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Art Unit 2183
Paper Number 20041118

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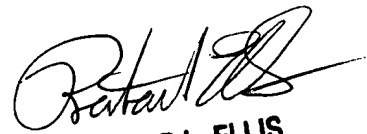
PURSUANT TO 37 CFR § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Richard Ellis whose telephone number is (571) 272-4165. The Examiner can normally be reached on Monday through Thursday from 7am to 5pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Eddie Chan, can be reached on (571) 272-4162. The fax phone number for the USPTO is: (703)872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Richard Ellis
November 18, 2004



RICHARD L. ELLIS
PRIMARY EXAMINER